



SeqListing.txt
SEQUENCE LISTING

<110> Zhu, Zhenping
Witte, Larry

<120> Antibodies Specific to KDR and Uses Thereof

<130> 11245/46506

<140> 10/809,387

<141> 2004-03-23

<150> 09/976,787

<151> 2001-10-12

<150> 09/493,539

<151> 2000-01-28

<150> 60/117,726

<151> 1999-01-29

<160> 40

<170> wordPerfect 8.0 for windows

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<212> PRT

<213> Mus musculus

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Gly Phe Asn Ile Lys Asp Phe Tyr Met His
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Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe Gln
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Gly
17

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Tyr Tyr Gly Asp Tyr Glu Gly Tyr
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<210> 4

SeqListing.txt

<211> 10
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Ser Ala Ser Ser Ser Val Ser Tyr Met His
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Ser Thr Ser Asn Leu Ala Ser
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Gln Gln Arg Ser Ser Tyr Pro Phe Thr
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Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe
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Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
35 40 45

Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe
50 55 60

Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr
65 70 75 80

Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
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Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Val Thr Val Ser Ser
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SeqListing.txt

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 20 25 30
 His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
 35 40 45
 Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
 50 55 60
 Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
 65 70 75 80
 Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
 85 90 95
 Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala
 100 105

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ggc
 Gly
 17 51

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 <212> DNA
 <213> Mus musculus

SeqListing.txt

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<213> Mus musculus

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 Ser Ala Ser Ser Ser Val Ser Tyr Met His
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 Gln Gln Arg Ser Ser Tyr Pro Phe Thr
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<211> 351

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tca gtc aaa ttg tcc tgc aca act tct ggc ttc aac att aaa gac ttc 96
 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe
 20 25 30

tat atg cac tgg gtg aag cag agg cct gaa cag ggc ctg gag tgg att 144
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
 35 40 45

gga tgg att gat cct gag aat ggt gat tct ggt tat gcc ccg aag ttc 192
 Page 4

SeqListing.txt

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Gln	Gly	Lys	Ala	Thr	Met	Thr	Ala	Asp	Ser	Ser	Ser	Asn	Thr	Ala	Tyr	80	
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ctg	cag	ctc	agc	agc	ctg	aca	tct	gag	gac	act	gcc	gtc	tat	tac	tgt	288	
Leu	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	95	
				85					90								
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Asn	Ala	Tyr	Tyr	Gly	Asp	Tyr	Glu	Gly	Tyr	Trp	Gly	Gln	Gly	Thr	Thr	110	
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Val	Thr	Val	Ser	Ser													
		115															

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Glu	Lys	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	30	
			20					25									
cac	tgg	ttc	cag	cag	aag	cca	ggc	act	tct	ccc	aaa	ctc	tgg	att	tat	144	
His	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Thr	Ser	Pro	Lys	Leu	Trp	Ile	Tyr	45	
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		50				55					60						
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Gly	Ser	Gly	Thr	Ser	Tyr	Ser	Leu	Thr	Ile	Ser	Arg	Met	Glu	Ala	Glu	80	
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gat	gct	gcc	act	tat	tac	tgc	cag	caa	agg	agt	agt	tac	cca	ttc	acg	288	
Asp	Ala	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Arg	Ser	Ser	Tyr	Pro	Phe	Thr	95	
				85					90								
ttc	ggc	tcg	ggg	acc	aag	ctg	gaa	ata	aaa	cgg	gcg					324	
Phe	Gly	Ser	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Ala						
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<210> 17
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 <213> Artificial Sequence

<220>
 <223> peptide linker

SeqListing.txt

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<223> nucleic acid encoding peptide linker

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<223> nucleic acid encoding peptide linker

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<400> 21

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SeqListing.txt

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<400> 22

Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe Gln
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 Gly
 17

<210> 23
 <211> 117
 <212> PRT
 <213> Mouse

<400> 23

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 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe
 20 25 30
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe
 50 55 60
 Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr
 100 105 110
 Val Thr Val Ser Ser
 115

<210> 24
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 <213> Mouse

<400> 24

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 Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
 20 25 30
 His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
 35 40 45

SeqListing.txt

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
 50 55 60
 Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
 65 70 75 80
 Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
 85 90 95
 Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
 100 105

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<400> 25

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 ggc 51
 Gly
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<400> 26

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 1 5 10 15
 tca gtc aaa ttg tcc tgc aca act tct ggc ttc aac att aaa gac ttc 96
 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe
 20 25 30
 tat atg cac tgg gtg aag cag agg cct gaa cag ggc ctg gag tgg att 144
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 gga tgg att gat cct gag aat ggt gat tct gat tat gcc ccg aag ttc 192
 Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe
 50 55 60
 cag ggc aag gcc acc atg act gca gac tca tcc tcc aac aca gcc tac 240
 Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 ctg cag ctc agc agc ctg aca tct gag gac act gcc gtc tat tac tgt 288
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 aat gca tac tat ggt gac tac gaa ggc tac tgg ggc caa ggg acc acg 336
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SeqListing.txt

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gag aag gtc acc ata acc tgc agt gcc agc tca agt gta agt tac atg 96
Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
20 25 30

cac tgg ttc cag cag aag cca ggc act tct ccc aaa ctc tgg att tat 144
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
35 40 45

agc aca tcc aac ctg gct tct gga gtc cct gct cgc ttc agt ggc agt 192
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

gga tct ggg acc tct tac tct ctc aca atc agc cga atg gag gct gaa 240
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65 70 75 80

gat gct gcc act tat tac tgc cag caa agg agt agt tac cca ttc acg 288
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
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Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
35 40 45

Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe
50 55 60

Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr
65 70 75 80

SeqListing.txt

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 Val Thr Val₁₁₅ Ser Ser Gly Gly₁₂₀ Gly Ser Gly Gly₁₂₅ Gly Ser Gly
 Gly Gly₁₃₀ Gly Ser Asp Ile Glu₁₃₅ Leu Thr Gln Ser Pro₁₄₀ Ala Ile Met Ser
 Ala₁₄₅ Ser Pro Gly Glu Lys₁₅₀ Val Thr Ile Thr Cys₁₅₅ Ser Ala Ser Ser₁₆₀
 Val Ser Tyr Met His₁₆₅ Trp Phe Gln Gln Lys₁₇₀ Pro Gly Thr Ser Pro₁₇₅ Lys
 Leu Trp Ile Tyr₁₈₀ Ser Thr Ser Asn Leu₁₈₅ Ala Ser Gly Val Pro₁₉₀ Ala Arg
 Phe Ser Gly₁₉₅ Ser Gly Ser Gly Thr₂₀₀ Ser Tyr Ser Leu Thr₂₀₅ Ile Ser Arg
 Met Glu₂₁₀ Ala Glu Asp Ala Ala₂₁₅ Thr Tyr Tyr Cys Gln₂₂₀ Gln Arg Ser Ser
 Tyr₂₂₅ Pro Phe Thr Phe Gly₂₃₀ Ser Gly Thr Lys Leu₂₃₅ Glu Ile Lys Arg Ala₂₄₀

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<400> 29

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 Tyr Met His₃₅ Trp Val Lys Gln Arg₄₀ Pro Glu Gln Gly Leu₄₅ Glu Trp Ile
 Gly Trp₅₀ Ile Asp Pro Glu Asn₅₅ Gly Asp Ser Asp Tyr₆₀ Ala Pro Lys Phe
 Gln Gly Lys Ala Thr Met₇₀ Thr Ala Asp Ser Ser₇₅ Ser Asn Thr Ala Tyr₈₀
 Leu Gln Leu Ser Ser₈₅ Leu Thr Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Asn Ala Tyr Tyr₁₀₀ Gly Asp Tyr Glu Gly₁₀₅ Tyr Trp Gly Gln Gly₁₁₀ Thr Thr
 Val Thr Val₁₁₅ Ser Ser Gly Gly₁₂₀ Gly Ser Gly Gly₁₂₅ Gly Gly Ser Gly

SeqListing.txt

Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile Met Ser
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 Ala Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser
 145 150 155 160
 Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys
 165 170 175
 Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg
 180 185 190
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg
 195 200 205
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 225 230 235

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 <212> DNA
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 tca gtc aaa ttg tcc tgc aca act tct ggc ttc aac att aaa gac ttc 96
 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe
 20 25 30
 tat atg cac tgg gtg aag cag agg cct gaa cag ggc ctg gag tgg att 144
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 gga tgg att gat cct gag aat ggt gat tct ggt tat gcc ccg aag ttc 192
 Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe
 50 55 60
 cag ggc aag gcc acc atg act gca gac tca tcc tcc aac aca gcc tac 240
 Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 ctg cag ctc agc agc ctg aca tct gag gac act gcc gtc tat tac tgt 288
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 aat gca tac tat ggt gac tac gaa ggc tac tgg ggc caa ggg acc acg 336
 Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr
 100 105 110
 gtc acc gtc tcc tca ggt gga ggc ggt tca ggc gga ggt ggc tct ggc 384
 Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly
 115 120 125
 ggt ggc gga tcg gac atc gag ctc act cag tct cca gca atc atg tct 432
 Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile Met Ser

SeqListing.txt
140

130	135																
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145 150 155 160																	
gta agt tac atg cac tgg ttc cag cag aag cca ggc act tct ccc aaa	528																
Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys																	
165 170 175																	
ctc tgg att tat agc aca tcc aac ctg gct tct gga gtc cct gct cgc	576																
Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg																	
180 185 190																	
ttc agt ggc agt gga tct ggg acc tct tac tct ctc aca atc agc cga	624																
Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg																	
195 200 205																	
atg gag gct gaa gat gct gcc act tat tac tgc cag caa agg agt agt	672																
Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser																	
210 215 220																	
tac cca ttc acg ttc ggc tcg ggg acc aag ctg gaa ata aaa cgg gcg	720																
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<213> Mouse

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Ser Val Lys Leu Ser Cys Thr Thr Ser Ser Phe Asn Ile Lys Asp Phe	
20 25 30	
tat atg cac tgg gtg aag cag agg cct gaa cag ggc ctg gag tgg att	144
Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile	
35 40 45	
gga tgg att gat cct gag aat ggt gat tct gat tat gcc ccg aag ttc	192
Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe	
50 55 60	
cag ggc aag gcc acc atg act gca gac tca tcc tcc aac aca gcc tac	240
Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr	
65 70 75 80	
ctg cag ctc agc agc ctg aca tct gag gac act gcc gtc tat tac tgt	288
Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys	
85 90 95	
aat gca tac tat ggt gac tac gaa ggc tac tgg ggc caa ggg acc acg	336
Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr	
100 105 110	
gtc acc gtc tcc tca ggt gga ggc ggt tca ggc gga ggt agc tct ggc	384

SeqListing.txt

Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Ser	Ser	Gly	
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Gly	Gly	Gly	Ser	Asp	Ile	Glu	Leu	Thr	Gln	Ser	Pro	Ala	Ile	Met	Ser	
	130					135					140					
gca	tct	cca	ggg	gag	aag	gtc	acc	ata	acc	tgc	agt	gcc	agc	tca	agt	480
Ala	Ser	Pro	Gly	Glu	Lys	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	
145					150					155					160	
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Val	Ser	Tyr	Met	His	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Thr	Ser	Pro	Lys	
				165					170					175		
ctc	tgg	att	tat	agc	aca	tcc	aac	ctg	gct	tct	gga	gtc	cct	gct	cgc	576
Leu	Trp	Ile	Tyr	Ser	Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro	Ala	Arg	
			180					185					190			
ttc	agt	ggc	agt	gga	tct	ggg	acc	tct	tac	tct	ctc	aca	atc	agc	cga	624
Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Ser	Tyr	Ser	Leu	Thr	Ile	Ser	Arg	
		195					200					205				
atg	gag	gct	gaa	gat	gct	gcc	act	tat	tac	tgc	cag	caa	agg	agt	agt	672
Met	Glu	Ala	Glu	Asp	Ala	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Arg	Ser	Ser	
	210					215					220					
tac	cca	ttc	acg	ttc	ggc	tcg	ggg	acc	aag	ctg	gaa	ata	aaa			714
Tyr	Pro	Phe	Thr	Phe	Gly	Ser	Gly	Thr	Lys	Leu	Glu	Ile	Lys			
225					230					235						

<210> 32
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 <213> Mouse

<220>
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<400> 32

Met	Gly	Trp	Ser	Cys	Leu	Ile	Leu	Phe	Leu	Val	Ala	Thr	Ala	Thr	Gly	
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Val	His	Ser														
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<400> 33

atg	gga	tgg	tca	tgt	ctc	atc	ctt	ttt	cta	gta	gca	act	gca	act	gga	48
Met	Gly	Trp	Ser	Cys	Leu	Ile	Leu	Phe	Leu	Val	Ala	Thr	Ala	Thr	Gly	
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gta	cat	tca														57
Val	His	Ser														

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 <213> Mouse

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Val His Ser
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 <212> DNA
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<400> 35

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 Val His Ser
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SeqListing.txt

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